Jobs Surveyed *8th Annual Survey* 2023 Northwest Engineering / Scientific / Project Management Survey

Sample Job Number Guide

1.0 - Executive

1-10 Top Engineer Position
1-20 Top Scientist Position
1-30 Top Project Management Position

2.0 - Engineering

Civil Engineering
2-07 7 Civil Engineer - Director
2-07 6 Civil Engineer - Manager
2-07 4 Civil Engineer - Principal
2-07 3 Civil Engineer - Senior
2-07 2 Civil Engineer II
2-07 1 Civil Engineer I

Civil Engineering - PE
2-08 4 Civil Engineer - PE - Principal
2-08 3 Civil Engineer - PE - Senior
2-08 2 Civil Engineer - PE II
2-08 1 Civil Engineer - PE I

Design Engineering
2-09 7 Design Engineer - Director
2-09 6 Design Engineer - Manager
2-09 4 Design Engineer - Principal
2-09 3 Design Engineer - Senior
2-09 2 Design Engineer II
2-09 1 Design Engineer I

Electrical Engineering
2-11 7 Electrical Engineer - Director
2-11 6 Electrical Engineer - Manager
2-11 4 Electrical Engineer - Principal
2-11 3 Electrical Engineer - Senior
2-11 2 Electrical Engineer II
2-11 1 Electrical Engineer I

Electrical Systems Engineering
2-13 7 Electrical Systems Engineer - Director
2-13 6 Electrical Systems Engineer - Manager
2-13 4 Electrical Systems Engineer - Principal
2-13 3 Electrical Systems Engineer - Senior
2-13 2 Electrical Systems Engineer II
2-13 1 Electrical Systems Engineer I

Environmental Engineering
2-15 7 Environmental Engineer - Director
2-15 6 Environmental Engineer - Manager
2-15 4 Environmental Engineer - Principal
2-15 3 Environmental Engineer - Senior
2-15 2 Environmental Engineer II
2-15 1 Environmental Engineer I

Facilities Engineering
2-17 7 Facilities Engineer - Director
2-17 6 Facilities Engineer - Manager
2-17 4 Facilities Engineer - Principal
2-17 3 Facilities Engineer - Senior
2-17 2 Facilities Engineer II
2-17 1 Facilities Engineer I

Manufacturing Engineering
2-19 7 Manufacturing Engineer - Director
2-19 6 Manufacturing Engineer - Manager
2-19 4 Manufacturing Engineer - Principal
2-19 3 Manufacturing Engineer - Senior
2-19 2 Manufacturing Engineer II
2-19 1 Manufacturing Engineer I

Mechanical Engineering
2-21 7 Mechanical Engineer - Director
2-21 6 Mechanical Engineer - Manager
2-21 4 Mechanical Engineer - Principal
2-21 3 Mechanical Engineer - Senior
2-21 2 Mechanical Engineer II
2-21 1 Mechanical Engineer I

Process Improvement Engineering
2-25 7 Process Improvement Engineering - Director
2-25 6 Process Improvement Engineering - Manager
2-25 4 Process Improvement Engineering - Principal
2-25 3 Process Improvement Engineering - Senior
2-25 2 Process Improvement Engineering II
2-25 1 Process Improvement Engineering I

Product Support - Engineering
2-30 7 Product Support - Engineering - Director
2-30 6 Product Support - Engineering - Manager
2-30 4 Product Support - Engineering - Principal
2-30 3 Product Support - Engineering - Senior
2-30 2 Product Support - Engineering II
2-30 1 Product Support - Engineering I

Quality Engineering
2-33 7 Quality Engineer - Director
2-33 6 Quality Engineer - Manager
2-33 4 Quality Engineer - Principal
2-33 3 Quality Engineer - Senior
2-33 2 Quality Engineer II
2-33 1 Quality Engineer I

Software Engineering
2-36 7 Software Engineer - Director
2-36 6 Software Engineer - Manager
2-36 4 Software Engineer - Principal
2-36 3 Software Engineer - Senior
2-36 2 Software Engineer II
2-36 1 Software Engineer I

Systems Engineering
2-37 7 Systems Engineer - Director
2-37 6 Systems Engineer - Manager
2-37 4 Systems Engineer - Principal
2-37 3 Systems Engineer - Senior
2-37 2 Systems Engineer II
2-37 1 Systems Engineer I

Engineering General / Other
2-40 7 Engineering General / Other - Director
2-40 6 Engineering General / Other - Manager
2-40 4 Engineering General / Other - Principal
2-40 3 Engineering General / Other - Senior
2-40 2 Engineering General / Other II
2-40 1 Engineering General / Other I

Engineering Technician
2-45 3 Engineering Technician - Senior
2-45 2 Engineering Technician II
2-45 1 Engineering Technician I

Right of Way Agent
2-50 3 Right of Way Agent - Senior
2-50 2 Right of Way Agent II
2-50 1 Right of Way Agent I

CAD Technician / Operator
2-60 3 CAD Technician / Operator - Senior
2-60 2 CAD Technician / Operator II
2-60 1 CAD Technician / Operator I

GIS Technician / Analyst
2-70 3 GIS Technician / Analyst - Senior
2-70 2 GIS Technician / Analyst II
2-70 1 GIS Technician / Analyst I

3.0 - Scientific

Animal Technician
3-01 3 Animal Technician - Senior
3-01 2 Animal Technician II
3-01 1 Animal Technician I

Biologist
3-10 3 Biologist - Senior
3-10 2 Biologist II
3-10 1 Biologist I

Microbiologist
3-12 3 Microbiologist - Senior
3-12 2 Microbiologist II
3-12 1 Microbiologist I

Biologist - Fishery
3-14 3 Biologist Fishery - Senior
3-14 2 Biologist Fishery II
3-14 1 Biologist Fishery I

Biologist - Wildlife
3-16 3 Biologist Wildlife - Senior
3-16 2 Biologist Wildlife II
3-16 1 Biologist Wildlife I

Bio-Informatics
3-20 7 Bio-Informatics - Director
3-20 6 Bio-Informatics - Manager
3-20 4 Bio-Informatics - Principal
3-20 3 Bio-Informatics - Senior
3-20 2 Bio-Informatics II
3-20 1 Bio-Informatics I

Bio-Statistician
3-23 7 Bio-Statistician - Director
3-23 6 Bio-Statistician - Manager
3-23 4 Bio-Statistician - Principal
3-23 3 Bio-Statistician - Senior
3-23 2 Bio-Statistician II
3-23 1 Bio-Statistician I

Chemist
3-30 7 Chemist - Director
3-30 6 Chemist - Manager
3-30 4 Chemist - Principal
3-30 3 Chemist - Senior
3-30 2 Chemist II
3-30 1 Chemist I

(continued)

249 benchmark positions
(plus supplemental roll-up data)

* *New - 2023* ** *Revised - 2023*

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Jobs Surveyed *8th Annual Survey* 2023 Northwest Engineering / Scientific / Project Management Survey

Clinical Research Associate
3-35 7 Clinical Research Associate - Director
3-35 6 Clinical Research Associate - Manager
3-35 4 Clinical Research Associate - Principal
3-35 3 Clinical Research Associate - Senior
3-35 2 Clinical Research Associate II
3-35 1 Clinical Research Associate I

Environmental Health
3-40 7 Environmental Health - Director
3-40 6 Environmental Health - Manager
3-40 4 Environmental Health - Principal
3-40 3 Environmental Health - Senior
3-40 2 Environmental Health II
3-40 1 Environmental Health I

Geologist
3-50 3 Geologist - Senior
3-50 2 Geologist II
3-50 1 Geologist I

Hydrologist
3-53 3 Hydrologist - Senior
3-53 2 Hydrologist II
3-53 1 Hydrologist I

Laboratory Management
3-60 7 Laboratory - Director
3-60 6 Laboratory - Manager
3-60 5 Laboratory - Supervisor

Laboratory Aide
3-65 3 Laboratory Aide - Senior
3-65 2 Laboratory Aide II
3-65 1 Laboratory Aide I

Laboratory Technician
3-69 3 Laboratory Technician - Senior
3-69 2 Laboratory Technician II
3-69 1 Laboratory Technician I

Research Administration
3-70 7 Research Administration - Director
3-70 6 Research Administration - Manager
3-70 3 Research Administrator - Senior
3-70 2 Research Administrator II
3-70 1 Research Administrator I

Research Technician
3-72 3 Research Technician - Senior
3-72 2 Research Technician II
3-72 1 Research Technician I

Research Scientist
3-75 7 Research Scientist - Director
3-75 6 Research Scientist - Manager
3-75 4 Research Scientist - Principal
3-75 3 Research Scientist - Senior
3-75 2 Research Scientist II
3-75 1 Research Scientist I

Scientist - Clinical
3-80 7 Scientist - Clinical - Director
3-80 6 Scientist - Clinical - Manager
3-80 4 Scientist - Clinical - Principal
3-80 3 Scientist - Clinical - Senior
3-80 2 Scientist - Clinical II
3-80 1 Scientist - Clinical I

Principal Investigator
3-85 Principal Investigator, Full Member
3-86 Principal Investigator, Associate Member
3-87 Principal Investigator, Assistant Member

4.0 - Project Management

Estimator
4-05 6 Estimator - Manager
4-05 3 Estimator - Senior
4-05 2 Estimator II
4-05 1 Estimator I

Grants & Contracts Administrator
4-10 7 Grants & Contracts Administrator - Director
4-10 6 Grants & Contracts Administrator - Manager
4-10 3 Grants & Contracts Administrator - Senior
4-10 2 Grants & Contracts Administrator II
4-10 1 Grants & Contracts Administrator I

Product Development
4-20 7 Product Development - Director
4-20 6 Product Development - Manager
4-20 4 Product Development - Principal
4-20 3 Product Development - Senior
4-20 2 Product Development II
4-20 1 Product Development I

Product Manager
4-30 7 Product Manager - Director
4-30 6 Product Manager - Manager
4-30 4 Product Manager - Principal
4-30 3 Product Manager - Senior
4-30 2 Product Manager II
4-30 1 Product Manager I

Program Manager
4-40 7 Program Manager - Director
4-40 6 Program Manager - Manager
4-40 4 Program Manager - Principal
4-40 3 Program Manager - Senior
4-40 2 Program Manager II
4-40 1 Program Manager I

Program Administrator
4-45 3 Program Administrator - Senior
4-45 2 Program Administrator II
4-45 1 Program Administrator I

Project Coordination
4-50 3 Project Coordinator - Senior
4-50 2 Project Coordinator II
4-50 1 Project Coordinator I

Project Management - Construction
4-65 7 Project Management - Construction - Director
4-65 6 Project Management - Construction - Manager
4-65 4 Project Manager - Construction - Principal
4-65 3 Project Manager - Construction - Senior
4-65 2 Project Manager - Construction II
4-65 1 Project Manager - Construction I

Project Management - Engineering
4-70 7 Project Management - Engineering - Director
4-70 6 Project Management - Engineering - Manager
4-70 4 Project Manager - Engineering - Principal
4-70 3 Project Manager - Engineering - Senior
4-70 2 Project Manager - Engineering II
4-70 1 Project Manager - Engineering I

Project Management - Facilities
4-80 7 Project Management - Facilities - Director
4-80 6 Project Management - Facilities - Manager
4-80 4 Project Manager - Facilities - Principal
4-80 3 Project Manager - Facilities - Senior
4-80 2 Project Manager - Facilities II
4-80 1 Project Manager - Facilities I

Project Management - IT
4-85 7 Project Management - IT - Director
4-85 6 Project Management - IT - Manager
4-85 4 Project Manager - IT - Principal
4-85 3 Project Manager - IT - Senior
4-85 2 Project Manager - IT II
4-85 1 Project Manager - IT I

Project Management - General / Other
4-90 7 Project Management - General / Other - Director
4-90 6 Project Management - General / Other - Manager
4-90 4 Project Manager - General / Other - Principal
4-90 3 Project Manager - General / Other - Senior
4-90 2 Project Manager - General / Other II
4-90 1 Project Manager - General / Other I

Supplemental Roll Up Data

5-20 7 Engineers (jobs 2-01 through 2-40) - Director
5-20 6 Engineers (jobs 2-01 through 2-40) - Manager
5-20 4 Engineers (jobs 2-01 through 2-40) - Principal
5-20 3 Engineers (jobs 2-01 through 2-40) - Senior
5-20 2 Engineers (jobs 2-01 through 2-40) - II
5-20 1 Engineers (jobs 2-01 through 2-40) - I

5-30 3 Biologists (jobs 3-10 through 3-16) - Senior
5-30 2 Biologists (jobs 3-10 through 3-16) - II
5-30 1 Biologists (jobs 3-10 through 3-16) - I

5-35 7 Scientists (jobs 3-75 and 3-80) - Director
5-35 6 Scientists (jobs 3-75 and 3-80) - Manager
5-35 4 Scientists (jobs 3-75 and 3-80) - Principal
5-35 3 Scientists (jobs 3-75 and 3-80) - Senior
5-35 2 Scientists (jobs 3-75 and 3-80) - II
5-35 1 Scientists (jobs 3-75 and 3-80) - I

5-40 7 Project Managers (jobs 4-60 through 4-90) - Director
5-40 6 Project Managers (jobs 4-60 through 4-90) - Manager
5-40 4 Project Managers (jobs 4-60 through 4-90) - Principal
5-40 3 Project Managers (jobs 4-60 through 4-90) - Senior
5-40 2 Project Managers (jobs 4-60 through 4-90) - II
5-40 1 Project Managers (jobs 4-60 through 4-90) - I

** New - 2023* *** Revised - 2023*

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Job Level Guide

2023 Northwest Engineering / Scientific / Project Management Survey

Job Level	Scope of Responsibility	Knowledge & Skills	Independent Judgment	Typical Experience for Professional / Exempt Level Jobs*	Typical Experience for Administrative / Non-Exempt Level Jobs
7 Director	Manages and directs work efforts of others, and may have managerial-level direct reports. Directs broad functional area and usually has budget responsibilities.	In-depth comprehensive knowledge and understanding of department and functional area. Typically directs a large functional area or entire business unit. Must have strong leadership skills.	Extensive latitude for independent judgment and decision making.	The typical incumbent will have 8-10+ years experience, including 2-5 years management experience.	N/A
6 Manager	Manages / supervises work efforts of others. Assesses performance and has hiring/ firing authority.	Comprehensive knowledge and understanding of department and functional area. Must have strong leadership skills.	Significant latitude for independent judgment and decision making.	The typical incumbent will have 6+ years experience, including leadership experience.	N/A
4 Principal Level	Principal level role. Works under very minimal to no supervision. Is typically used in highly technical, scientific or consulting fields.	Extensive knowledge and skills. Considered an expert in their respective field. Typically acts as lead and provides technical leadership to the group. This position is usually held by a limited number of key individuals.	Significant latitude for independent judgment and decision making.	The typical incumbent will have 10+ years experience.	N/A
3 Senior Level	Advanced or Senior level role. Works under minimal supervision.	Advanced knowledge and skills. Works on complex projects. May act as lead or mentor over less experienced individuals.	Wide latitude for independent judgment and decision making.	The typical incumbent will have 6-9 years experience.	The typical incumbent will have 4+ years experience.
2 Intermediate Level	Intermediate level role. Works under moderate supervision.	Intermediate level knowledge and skills. Works on moderately complex projects and assignments.	Moderate latitude for independent judgment and decision making.	The typical incumbent will have 3-6 years experience.	The typical incumbent will have 2-4 years experience.
1 Associate Level	Entry level role. Works under close supervision.	Basic to intermediate level knowledge and skills. Works on simple projects and assignments.	Little latitude for independent judgment and decision making.	The typical incumbent will have 0-3 years experience.	The typical incumbent will have 0-2 years experience.

** Years of experience is a general guideline of the typical amount of experience it may take an average incumbent to reach that level. An incumbent's actual experience should not be used as a primary factor in determining the appropriate job level because skill acquisition rates can vary significantly amongst individuals.*

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Job Definitions (see page 3 for Job Level Definitions)

- Positions should be matched by first identifying the **Job Family** which best describes the position's ***primary*** function, and then matching the **appropriate Job Level within that family**.
- Each Job Family typically represents a different technology discipline or occupational group. These job families are functional, not necessarily organizational, although many organizations align their reporting relations and departments along functional lines.

EXAMPLE:

2.0 - Engineering (Category)

2-05 - Chemical Engineering (Job Family)

2-05 3 Chemical Engineer - Senior (Job Level)

Job Descriptions

1.0 - Executive Jobs

1-10 Top Engineer Position

Directs, plans, develops, and coordinates all planning and implementation of practices, policies, programs, procedures, and personnel activities of an organization's engineering efforts. Oversees the design, modification, and improvement of company products and/or services; design testing and maintenance of production processes, machinery, and/or equipment; design and maintenance of facilities, equipment, and physical layout; reliability improvements; cost engineering; construction and engineering project management; and other related activities. Directs engineering management in formulating plans, designs, cost estimates, and specifications. Reviews engineering designs in light of the organization's strategic goals and return on investment. Provides technical support and assistance to other operating units of the organization. Conducts special investigations and studies to evaluate efficiency of engineering programs. Confers with manufacturing and research departments to ensure product design, development, and modification are in conformance with organization's goals and objectives. Establishes budget controls. Reviews, approves, and coordinates product and process changes to maintain or improve cost/benefit ratio. Assesses working conditions to ensure compliance with all regulations and safety standards.

1-20 Top Scientist Position

Plans and directs all aspects of an organization's scientific research and development policies, objectives, and initiatives. Maintains organization's competitive position and profitability by formulating research and development programs. Researches new technologies that align the development function with the goals of the organization. Typically requires at least 15 years of experience in the field. Demonstrates expertise in a variety of the field's concepts, practices, and procedures. Relies on extensive experience and judgment to plan and accomplish goals. Performs a variety of tasks. Leads and directs the work of others. A wide degree of creativity and latitude is expected. Typically reports to top management.

1-30 Top Project Management Position

Oversees projects from the planning stage through implementation, testing and reporting. Develops and recommends strategic planning for the operational improvement of the organization. Implements production, productivity, quality, and customer-service standards; resolving problems; completing audits; identifying trends; determining system improvements; implementing change. Forecasts business and personnel requirements; preparing an annual budget; scheduling expenditures; analyzing variances; initiating corrective actions.

2.0 - Engineering

2-07 Civil Engineering

Performs complex civil engineering assignments with considerable latitude for action and decision making. Plans, designs, and oversees construction and maintenance of structures and facilities. May perform technical research and utilize computers as aids in developing solutions to engineering projects.

2-08 Civil Engineering - PE

Performs complex civil engineering assignments with considerable latitude for action and decision making. Plans, designs, and oversees construction and maintenance of structures and facilities. May perform technical research and utilize computers as aids in developing solutions to engineering projects. PE license required.

2-09 Design Engineering

Performs design engineering assignments applying standard engineering practices and principles. Assists in the design of products, parts, components, or assigned phases of major projects. Conducts necessary research incidental to specific design problems. Recommends design modifications as indicated by test and usage.

2-11 Electrical Engineering

Researches, designs, develops, and tests a variety of electronic and electromagnetic equipment, components, and systems. Incorporates new technology in the design or redesign of electrical components, products, or facilities.

2-13 Electrical Systems Engineering

Performs special studies on distribution systems; system reliability, voltage drop, fault current, etc. Designs substation, transmission and distribution projects. Interprets scope and requirements of projects; develops alternatives; coordinates with other agencies; makes economic and engineering evaluations, sketches computations and notes; recommends action; locates and evaluates project sites; evaluates environmental impact, test data, procedure and materials.

2-15 Environmental Engineering

Assists management in the evaluation and control of operations to ensure all facilities are in compliance with local, state, and federal environmental laws and regulations. Conducts on-site inspections and hazard evaluations. May represent organization before regulatory agencies. Oversees impact assessment of environmental incidents.

2-17 Facilities Engineering

Plans and implements the design of plants, offices, and production lines in order to maximize the use of available space and improve efficiency. Estimates costs related to layout design, including equipment and materials, labor, etc., and monitors the construction process. Researches production/processing equipment or fixtures for purchase and gathers data relating to their ability to meet organizational needs. Ensures that established efficiency and safety targets are met.

2-19 Manufacturing Engineering

Designs and coordinates manufacturing processes. Plans or improves production methods including production flow, tooling, assembly methods, and production equipment. Estimates production times and optimum staffing for production schedules.

2-21 Mechanical Engineering

Performs research, design, development, and testing of mechanical products and systems. Designs, develops, and tests tools, machinery, and equipment.

2-25 Process Improvement Engineering

Provides technical and strategic leadership in developing, monitoring, and meeting the organization's process improvement goals. Typically includes the use of Lean and Six Sigma methodologies. Simplify and consolidate organizational processes and apply Lean Six Sigma principles and tools to improve overall quality and processes. Lead, coach, train and mentor teams in the use of Six Sigma tools and processes. Work with cross-functional teams to recommend and implement process improvement plans.

2-30 Product Support - Engineering

Provides highly technical and/or complex problem support and resolution for technical products and programs. This role works at a more complex level than the Product Support Representative, and handles issues escalated from that group, as well as from other sources. May work with other engineers and developers to research and help resolve highly technical issues and problems. Note: This role is for professional level engineers engaged in more complex and/or system level technical support issues/ problems. This is typically an exempt level job.

2-33 Quality Engineering

Uses advanced quality and reliability engineering principles to enhance product quality, reliability, and acceptance. Prevents problems by assessing and qualifying the capability of the product design-quality and reliability systems. Implements problem detection systems. Monitors the performance of the product design-quality and reliability systems, including on-board diagnostics (OBD). Solves problems that affect quality and reliability. Provides customer/vendor and management interface on quality, process, and reliability problems.

2-36 Software Engineering

Designs, develops, and troubleshoots software programs for operating or applications systems. Performs coding duties related to bug fixes, enhancements for existing products, and new features for new product releases. Provides input for systems documentation.

2-37 Systems Engineering

Responsible for the engineering, configuration and installation of the company's internal servers, operating systems and computer systems. Designs, evaluates and installs various operating systems (OSs), including Unix, Linux and/or Microsoft systems.

2-40 Engineering General / Other

Performs moderate to complex general engineering assignments, applying standard engineering practices and principles. Conducts necessary research incidental to specific engineering problems.

2-45 Engineering Technician

Assists engineers by performing basic research, design, development, and testing procedures as directed.

2-50 Right of Way Agent

Negotiates terms and conditions with property owners and public officials for easement agreements to secure purchase or lease of land and right-of-way for construction projects such as utility lines, pipelines or municipal civil projects. Prepares legal documents associated with the acquisition of real property rights including easements, options, leases, permits and fee title. Acquires public agency permits and variances for construction projects including railroad crossings projects. Conducts limited title searches, orders surveys and prepares escrow instructions for the closing of more complicated acquisitions.

2-60 CAD Technician / Operator

Develops CAD drawings from rough sketches or verbal instructions for municipal, utilities, commercial, or industrial projects. Works with engineers and planners to develop CAD drawings for various projects. Converts CAD drawings from outside agencies for organization use. Reviews developers' engineering drawings for CAD standards. Develops applications for facilities mapping as required.

2-70 GIS Technician / Analyst

Designs, develops, and implements GIS applications. Provides programming and custom application development of the GIS database and streamlines and enables efficient use of GIS software and operating systems. Provides analysis of GIS data, including analysis of complex user requirements, and evaluating potential GIS software and tools.

3.0 - Scientific

3-01 Animal Technician

Provides daily care for animals. Responsible for coordinating with supervisors on operational and technical duties and may perform simple surgery and post-operative care. Controls and restrains animals as required. Cleans, changes, and disinfects cages, pens, yards; sanitizes animal rooms, hallways, and ancillary equipment; and sterilizes medical and lab tools and equipment.

3-10 Biologist

Collects and analyzes biological data. Designs and performs analyses or experiments for quality or process control or to develop new products or knowledge. Maintains records and test results. May troubleshoot and develop analytical methods to support new technologies. May work in medical laboratory, planning and conducting experiments.

3-12 Microbiologist

Provides accurate and timely detection and identification of microbial populations, microbial contaminants, microbial infections, or genetic abnormalities through the microscopic examination and the analysis of environmental, agricultural, and biological samples. Performs a variety of tests and procedures.

3-14 Biologist - Fishery

Conducts multiple studies to determine how the environment and other outside forces affect fish life cycles. Gathers and documents statistics. May specialize in a specific field. Work may vary depending on location.

3-16 Biologist - Wildlife

Researches and monitors plant and animal habitats in a given region to determine various environmental and population dynamics. Gathers and documents statistics. May specialize in a specific field. Work may vary depending on location.

3-20 Bio-Informatics

Conducts research using bioinformatics theory and methods in areas such as pharmaceuticals, medical technology, biotechnology, computational biology, proteomics, computer information science, biology and medical informatics. May design databases and develop algorithms for processing and analyzing genomic information, or other biological information. Analyzes large molecular datasets such as raw microarray data, genomic sequence data, and proteomics data for clinical or basic research purposes. Consults with researchers to analyze problems, recommend technology-based solutions, or determine computational strategies. Manipulates publicly accessible, commercial, or proprietary genomic, proteomic, or post-genomic databases. Communicates research results through conference presentations, scientific publications, or project reports.

3-23 Bio-Statistician

Plans data collection, and analyzes and interprets numerical data from experiments, studies, surveys, and other sources, and utilizes statistical methodology to provide information for scientific research and statistical analysis.

3-30 Chemist

Conducts qualitative and quantitative chemical analyses or experiments for quality or process control or to develop new products or knowledge. Makes and records observations, performs calculations, and prepares data for evaluation. Reports results of testing. Maintains and performs related record keeping.

3-35 Clinical Research Associate

Conducts varied and complex experiments applying scientific techniques, procedures, and/or methods to complete tasks. Makes detailed observations, analyzes data, and interprets results. Prepares technical reports, summaries, protocols, and quantitative analyses. Maintains familiarity with current scientific literature and contributes to the process of a project within a scientific discipline, as well as investigating, creating, and developing new methods and technologies for project advancement. Troubleshoots complex problems. Works independently in evaluating, selecting, and applying scientific techniques, procedures, and/or methods to complete tasks.

3-40 Environmental Health

Coordinates comprehensive program for monitoring and disposal of hazardous chemical waste materials or radiation safety. Conducts inspections of laboratories and facilities to ensure compliance with regulations and procedures. Provides training to staff concerning hazardous materials and chemicals. Provides for the collection, storage, transportation and shipping of hazardous waste.

3-50 Geologist

Researches the composition, structure, and history of the earth's crust and ocean bottom. Analyzes rocks, minerals, and fossil remains to identify and determine sequence of processes affecting the development of earth. Utilizes knowledge of chemistry, physics, biology, and mathematics to explain these phenomena and may help locate mineral, geothermal, and petroleum deposits and underground water resources.

3-53 Hydrologist

Researches the quantity, distribution, circulation, and physical properties of underground and surface waters. Analyzes the form and intensity of precipitation, its rate of infiltration into the soil, its movement through the earth, and its return to the ocean and atmosphere. Reviews environmental preservation and flood control.

3-60 7 and 3-60 6 Laboratory Management

Director and Manager Levels

Provides overall technical and administrative management such as policy development and budgeting for a laboratory operation. Supervises and coordinates activities of laboratory technical and ancillary staff. Functional areas may include microbiology, histology, pathology, and related support services. Typically requires a master's degree. May manage a unit within a large laboratory, or the entire laboratory within a smaller organization.

3-60 5 Laboratory Management

Supervisor Level

Supervises and coordinates activities of assigned laboratory technical and ancillary staff. Functional areas may include microbiology, histology, pathology, and related support services. Typically requires a master's degree. May supervise a unit within a large laboratory, or the entire laboratory within a smaller organization. Typically excludes supervision of other functional areas. This is the first-line supervisory level, typically requiring previous laboratory operation experience.

3-65 Laboratory Aide

Performs nontechnical laboratory tasks such as sterilizing and stocking of lab materials, preparing simple culture media, compounds and reagents, and assisting in maintaining cleanliness of the lab.

3-69 Laboratory Technician

Under general supervision, performs technical laboratory work, including chemical and microscopic tests and examinations, prepares cultures, assists in inoculation. Analyzes, reviews, reports test results.

3-70 Research Administration

Performs research funding administration and general administrative support for one or more scientific investigators and/or departments. Coordinates and assists with completion of grant applications, reviews and submissions; monitors and administers awarded funds, related contracts and agreements; develops budgets and resolves spending allocation issues; assists with grant close out activities; provides general administrative support for the assigned area; may coordinate regulatory reviews of grants. Bachelor's degree typically required, Research Administrators Certification Council (RACC) certification and knowledge of Uniform Guidance (2 CRF 200) preferred.

3-72 Research Technician

Responsible for performing standard and investigative laboratory work in support of scientific research by performing bench-level experiments, operating analytical instruments, recovering, compiling and verifying the accuracy of research data; performing calculations; preparing charts, graphs and summaries.

3-75 Research Scientist

Plans and conducts experiments. Keeps accurate records of results for further analysis and presents findings. May work on research proposals and apply for funding.

3-80 Scientist - Clinical

Develops and manages clinical studies and all related research documents in the designing and executing of experiments. Tests, monitors and evaluates emerging clinical data. Contributes in the development, implementation and maintenance of procedures. May be responsible for training of clinical staff. Complies with regulatory requirements.

3-85 Principal Investigator - Full Member

This rank is comparable to that of Full Professor in a major university. A leader in field of research with national/international recognition. Has well-established research program, sustained productivity in research area and continues to publish in quality scientific journals. Mentors and supervises lower ranks members. Requires a doctoral degree.

3-86 Principal Investigator - Associate Member

This rank is comparable to that of Associate Professor in a major university. Independently design and execute scientific research projects. Has successfully procured research grants and funding awards and continues to publish research work in quality scientific journals. Requires a doctoral degree.

3-87 Principal Investigator - Assistant Member

This rank is comparable to that of Assistant Professor in a major university. Demonstrated research productivity and in early stages of establishing an independent research program. Has published work in respected scientific journals. Requires a doctoral degree.

4.0 - Project Management

4-05 Estimator

Estimates costs for construction projects, manufacturing of engineering products, or other projects or services requested to aid management in bidding on or determining price of product or service. Determines type of materials or equipment requirements; utilizes knowledge of products to be manufactured, services to be performed, or type of structure to be built, using blueprints and specifications.

4-10 Grants & Contracts Administrator

Administers activities concerned with grants and/or contracts within an organization. Negotiates contract with customer or bidder. Establishes standards and deadlines for proposals, resources, researches funding sources, and writes proposals to support the grant and contract writing and reporting activities of the organization. Reviews bids from other firms for conformity to contract requirements and determines acceptable bids. Provides bids, process specifications, test and progress reports, and other exhibits that may be required.

4-20 Product Development

Directs activities required to define, develop, and produce a specific product. Coordinates gathering and technical analysis of customer requirements. Responsible for leading product enhancement definition and inclusion into the specs. Provides general coordination, timeliness, and objectives for Development, Production, QA and Support organizations. May act as a resource for Product Marketing and Sales organizations. May be responsible for meeting schedule and budget for product development through release.

NOTE for 4-30 and 4-40 Job Families:

Product Managers and Program Managers often have overlapping functions. The primary differentiation is the level of specialization and emphasis. Product Managers tend to be more marketing and marketplace focused, while Program Managers tend to be more technical and development focused.

4-30 - Product Manager

Responsible for the development of product strategy, vision, product planning and execution throughout the product's life cycle, including its launch into the marketplace. Develops business and product plans and develops product positioning in the marketplace. Oversees and monitors competitive activity and identifies customer needs. Collaborates with the marketing/sales functions and external customers to define product requirements, capabilities, functionalities and desires. Works with product development, sales and other functional areas to develop new products or enhance existing products or product lines. In some organizations, may contribute to the technical specification development process and ongoing technical product development.

4-40 - Program Manager

Manages one or more major programs with organization-wide implications. May supervise employees involved in the provision of services in assigned program area(s). May actively recruit, train and supervise volunteers for program areas and other activities.

4-45 - Program Administrator

Provides administrative oversight and coordination of an assigned program. The focus is on the development, enhancement and implementation of a program, with typically little to no formal supervisory duties.

4-50 - Project Coordination

Works in conjunction with Project Managers to coordinate and track progress throughout the project lifecycle and to ensure project goals and objectives are accomplished within the prescribed timeframe and budgetary parameters. Tracks and documents project deliverables, and prepares status reports for management, clients or project personnel. Communicates with the various individuals or departments to ensure deliverables are met and that the project is on schedule.

4-65 - Project Management - Construction

Plans and manages construction projects while adhering to budget, scope and schedule requirements. Ensures coordination of the activities of functional groups that comprise the construction department team for the project including, but not limited to: construction monitoring, data management, statistics, and safety to ensure proper conduct and timely completion of all projects.

4-70 - Project Management - Engineering

Implements and maintains engineering objectives and initiatives. Manages creation and improvement of products that involve the engineering department. Manages, plans, and coordinates activities of projects to ensure that goals or objectives of projects are accomplished within prescribed time frame and funding parameters. Reviews project proposal or plan to determine time frame, funding limitations, procedures for accomplishing projects, staffing requirements, and allotment of available resources to various phases of projects. Establishes work plan and multi-disciplinary staffing for each phase of project, and arranges for recruitment or assignment of project personnel.

4-80 - Project Management - Facilities

Ensures optimal functioning of building systems including mechanical, electrical, fire/life safety, and elevators. Manages, plans, and coordinates activities of projects to ensure that goals or objectives of projects are accomplished within prescribed time frame and funding parameters. Oversees contractors for facility renovation project. Reviews project proposal or plan to determine time frame, funding limitations, procedures for accomplishing projects, staffing requirements, and allotment of available resources to various phases of projects. Establishes work plan and multi-disciplinary staffing for each phase of project, and arranges for recruitment or assignment of project personnel.

4-85 - Project Management - IT

Manages, coordinates, and establishes priorities for complete life-cycle of projects including the planning, design, programming, testing, and implementation of business solutions designed to meet requirements of various departments in the company, such as distribution, finance, and manufacturing. Designs project plans, which identify needs and define major tasks and milestones, based on scope, resources, budget, and personnel. Determines project needs and acquires resources required for the success of the project. Coordinates the development of new systems and/or applications projects, the modification of existing systems or applications, or changes in current methods or techniques. Coordinates project performance with the other work of the affected department or departments.

4-90 - Project Management - General / Other

Manages, plans, and coordinates activities of projects to ensure that goals or objectives of projects are accomplished within prescribed time frame and funding parameters. Reviews project proposal or plan to determine time frame, funding limitations, procedures for accomplishing projects, staffing requirements, and allotment of available resources to various phases of projects. Establishes work plan and multi-disciplinary staffing for each phase of project, and arranges for recruitment or assignment of project personnel.